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EXAMINER
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ART UNIT	PAPER NUMBER
2624	

DATE MAILED: 02/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 August 2000*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-58* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-58* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *31 August 2000* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1.   The title of the invention is not descriptive. A new title is required that is clearly

indicative of the invention to which the claims are directed.

2.   The disclosure is objected to because of the following informalities: throughout

the specification with reference to figures 11, 17 and 18, the word "root" is used to

designate the base or starting point of the serial bus network. However, throughout the

specification with reference to figure 28, the word "root" is used to designate different

data paths within a camera/printer system. It appears that in the second case the word

"root" should be replaced with the word "route." This alternative indicates different paths

for data within the system.

Drawings

3.   The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5)

because they include the following reference sign(s) not mentioned in the description:

S307 (figure 10), S3511 (figure 33A), S3622 (figure 34B). A proposed drawing

correction, corrected drawings, or amendment to the specification to add the reference

sign(s) in the description, are required in reply to the Office action to avoid

abandonment of the application. The objection to the drawings will not be held in

abeyance.

4.   The drawings are objected to because on page 23 lines 21-22, the specification

states that step S315 (figure 10) involves a "request for node number." However, figure

10 shows that S315 is a step for broadcasting ID information whereas step S313 is the

step for requesting node number (note: if the S315 on line 22 is changed to an S313, as

it should be, the reference sign S315 will not be mentioned in the description). A

proposed drawing correction or corrected drawings are required in reply to the Office

action to avoid abandonment of the application. The objection to the drawings will not

be held in abeyance.

Claim Rejections - 35 USC § 102

5.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6.   Claims 1, 9, 10, 14, 15-17 and 33 are rejected under 35 U.S.C. 102(e) as being

anticipated by Parulski (2001/0013894).

7.   In accordance with claims 1, 9, 10, 14, 15 and 33, Parulski discloses an image

processing system, which contains two image-processing apparatuses, an image input

apparatus 10 and an image output apparatus 30, connected via a serial bus line

(paragraph 44).

8.   Parulski further discloses that the apparatus comprises detection or notification

means for detecting performance of the other image processing apparatus or notifying

the other apparatus of the performance of the first image processing apparatus; in

Parulski's system, the input apparatus receives information regarding the capabilities of the output apparatus via the communication means 24 and 32 (paragraph 25).

9.   The apparatus further comprises control and determination means for determining where images should be processed and controlling distribution of image processing between the apparatuses on the basis of performance of the second apparatus; in Parulski's system, the input apparatus uses the received information and controls the image processing in accordance with the printers capabilities (paragraph 26).

10.   The output apparatus further comprises reception means 32 for receiving the image data transferred from the input apparatus (paragraph 26).

11.   The first apparatus further comprises image-processing means for performing image processing; in Parulski's system, the image processor 18 converts the image data, in accordance with the printer parameters (paragraph 26).

12.   In accordance with claim 16, the method steps of claim 16 are all performed by the means of the apparatus of claim 1. The control means of claim 1 performs the controlling step of claim 16.

13.   In accordance with claim 17, Parulski discloses using a program to stored in memory to operate the apparatus (paragraph 26). The code of the controlling step of claim 17 is performed in the controlling step of claim 16.

Claim Rejections - 35 USC § 103

14.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

15.   Claims 2-8, 12, 13, 18-24, 26, 28-32, and 34-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parulski in further view of Rissman (6,552,743).

16.   In accordance with claims 38, 53 and 54, Parulski discloses an image processing system in which two image-processing apparatuses, an image input apparatus 10 and an image output apparatus 30, are connected via a serial bus line (paragraph 44).

17.   Parulski further discloses that the input apparatus 10 comprises input means, i.e. imager 12 (paragraph 22). The apparatus further comprises determination means for determining whether to convert the image data of the first format into a second format and first conversion means for converting the image data of the first format into the second format on the basis of a determination result; in Parulski's system, image data is converted by the image processor 18, in accordance with the printer parameters (paragraph 26). The apparatus further comprises first communication means 24 for transmitting the image data of the first or second format to the output apparatus (paragraph 26).

18.   Parulski further discloses that the output apparatus 30 comprises second communication means 32 for receiving the image data transferred from the input apparatus (paragraph 26). The apparatus further comprises holding means 38 for holding the received image data in a buffer (paragraph 24). The apparatus further contains output means 42 for sequentially outputting the image data of the second format (paragraph 24).

19.   However, Parulski does not disclose expressly that the output apparatus contains second conversion means for converting the image data into the second format, if it is received in the first format.

20.   Rissman discloses that the output apparatus 10 contains second conversion means 50 (in step 540) for converting the image data into the second format, if it is received in the first format (col. 8 lines 36-38).

21.   Parulski and Rissman are combinable because they are from the same field of endeavor, namely image processing between a digital camera and a printer.

22.   Therefore, at the time of invention, it would have been obvious to a person of ordinary skill in the art, to the conversion between the first and second formats to be executed either by the image input apparatus, as disclosed by Parulski, or by the image output apparatus, as disclosed by Rissman.

23.   The motivation for doing so would have been to most efficiently utilize the available resources of the printer and camera. Parulski discloses a motivation for using the resources of a camera for image processing would be to allow the cost of the printer to be reduced (paragraph 5). However, when the printer has already been built with the necessary resources, sharing the camera's resources (as disclosed by Parulski) with the printer's (as disclosed by Rissman) can decrease processing time/improve efficiency.

24.   In accordance with claim 55, the method steps of claim 55 are all performed by the means of the apparatus of claim 38. The input, determination, first conversion, first communication, second communication, holding, second conversion and output means

of claim 38, respectively, perform the input, determination, first conversion,

transmission, reception, holding, second conversion and output steps of claim 55.

25.   In accordance with claim 58, Parulski discloses using a program to stored in

memory to operate the apparatus (paragraph 26). The code of input, determination,

first conversion, transmission, reception, holding, second conversion and output steps

of claim 58 are performed in the input, determination, first conversion, transmission,

reception, holding, second conversion and output steps of claim 55, respectively.

26.   In accordance with claims 39 and 56, Parulski discloses that the first format is a

compressed (paragraph 22) data format and the second is obtained by decompressing

the first (paragraph 26).

27.   In accordance with claim 40, Parulski discloses that the first format is JPEG

(paragraph 33).

28.   In accordance with claims 41, 57 and 42, the combination of Parulski and

Rissman makes obvious that the conversion of the file format would be made based on

the state of the buffer 38 in the output apparatus; if the buffer is full, the output

apparatus is processing data and cannot store received data, thus it cannot perform

further processing, which then must be performed by the input apparatus (or as

disclosed by Parulski), if it is empty then the output apparatus is available to perform the

image processing and store data (or as disclosed by Rissman).

29.   In accordance with claim 43, the combination of Parulski and Rissman makes

obvious that the conversion of the file format would also be made based on the state of

the serial bus; if the serial bus is busy, then data cannot be transmitted, thus the data

cannot be transferred to the output apparatus for processing, which then must be performed by the input apparatus (or as disclosed by Parulski), if the bus is available, data can be transferred, thus the output apparatus is available to perform the image processing (or as disclosed by Rissman).

30.   In accordance with claims 44, 45 and 46, Parulski discloses that the input apparatus receives information regarding the capabilities of the output apparatus via the communication means 24 and 32 (paragraph 25). Thus, it would be obvious to communicate the state of the buffer in this manner, or in the form of a request, and perform conversion based on the information, as described for claims 41 and 42, i.e. when the buffer is full.

31.   In accordance with claims 47, 48 and 49, Parulski discloses the image data to be compressed is first block transformed (paragraph 43), thus the combination of Parulski and Rissman results in the image conversion being performed for all or individual blocks after the determining means determines the appropriate conversion apparatus. In the case of individual blocks (with respect to claim 49), based on the determination of the determination means (as described for claims 41 and 42), the block may not be converted by the input apparatus.

32.   In accordance with claim 50, Parulski discloses that the input apparatus receives information regarding the capabilities of the output apparatus via the communication means 24 and 32 (paragraph 25). Thus, it would be obvious to compare the capabilities of the input and output apparatuses to determine which could perform the conversion the fastest, and perform the conversion in the fastest device.

33.   In accordance with claims 7, 18, 26, 34 and 36, Rissman discloses control

means 52, which controls conversion at the printer (col. 6 lines 32-35). This control

means, and Parulski's (described in claim 1) combined with the information regarding

device capabilities would be used to determine which control means would control

distribution. With respect to claim 26, Parulski discloses that the system contains an

image input apparatus 10 and an image output apparatus 30, connected via a serial bus

line (paragraph 44). With respect to claim 36, Parulski discloses using a program to

stored in memory to operate the apparatus (paragraph 26), thus it would be obvious to

use the program to implement this control method.

34.   In accordance with claims 8 and 19, it would be obvious that the control means of

the apparatus with the highest performance would distribute the image processing, so

that processing is completed more quickly.

35.   In accordance with claims 2 and 20, the commonly executed processes are

performed by the conversion means, as described for claim 38, as distributed by the

control means in each apparatus.

36.   In accordance with claims 3 and 21, the combination of Parulski and Rissman

makes obvious that if the first apparatus has a higher performance than the second, the

control means would distribute the image processing to the first apparatus (or as

disclosed by Parulski), so that processing is completed more quickly.

37.   In accordance with claims 4, 5, 6, 22, 23 and 24, Parulski discloses that the input

apparatus receives information regarding the capabilities of the output apparatus via the

communication means 24 and 32, i.e. serial bus (paragraph 25). Thus, it would be

obvious to share information regarding capabilities between both apparatuses and control processing distribution based on the apparatus capability information (as described in claim 3). With respect to claims 6 and 24, it would be therefore be obvious to compare the capabilities of the input and output apparatuses to determine which could perform the conversion the fastest, and perform the conversion in the fastest device, to minimize processing time.

38.   In accordance with claims 28, 29, 30, 35 and 37, Parulski discloses an image processing system, which contains two image-processing apparatuses, an image, input apparatus 10 and an image output apparatus 30, are connected via a serial bus line (paragraph 44).

39.   Parulski further discloses that image data processed in the first apparatus is stored in storage means 14 (paragraph 22) and is then transferred to the printer via the serial bus (paragraph 26).

40.   Rissman discloses that image data is stored in memory in the printer (col. 7 lines 30-32). The processor 50 then processes the image data there (col. 8 lines 36-38). Therefore, in combining Parulski and Rissman the printer (second apparatus) would select either of the storage locations for image data for printing. With respect to claim 37, Parulski discloses using a program to stored in memory to operate the apparatus (paragraph 26), thus it would be obvious to use the program to implement this control method.

41.   In accordance with claims 12, 13, 31, 32, 51 and 52, Parulski discloses that the serial bus is compatible with the USB or IEEE1394 standards (paragraph 44).

42.   <u>Claims 11, 27 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parulski in view Rissman in further view of Inoue (6,273,535).</u>

43.   <u>In accordance with claims 11 and 27</u>, Parulski does not disclose expressly that the image data is isochronously transferred.

44.   Inoue discloses that the image data is isochronously transferred (col. 9 line 67).

45.   Parulski, Rissman and Inoue are combinable because they are from the same field of endeavor, namely image processing between a digital camera and a printer.

46.   Therefore, at the time of invention, it would have been obvious to a person of ordinary skill in the art, to isochronously transfer the image data.

47.   The motivation for doing so would have been that isochronous transfer is "especially suitable for transferring data . . . that requires real-time transfer" (col. 16 line 66 – col. 17 line 2).

48.   <u>In accordance with claim 25</u>, Parulski does not disclose expressly that connection IDs are uniquely determined every time every time the apparatuses are connected to the system or that which of the apparatus's control means acquires control is determined based on the connection IDs.

49.   Inoue discloses that the connection IDs are uniquely determined every time every time the apparatuses are connected to the system (col. 9 line 44). Therefore, control would be determined based on the connection IDs, as established in the parent/child relationships, as described by Inoue (col. 11 lines 62-64).

50.   Parulski, Rissman and Inoue are combinable because they are from the same field of endeavor, namely image processing between a digital camera and a printer.

51.   Therefore, at the time of invention, it would have been obvious to a person of ordinary skill in the art, to assign connection IDs that are uniquely determined every time every time the apparatuses are connected to the system and to establish control based on the connection IDs.

52.   The motivation for doing so would have been that IDs are uniquely assigned in accordance with the IEEE1394 standard, which allows for plug-and-play function (col. 9 lines 44-52).

Contact Information

53.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl R. Reitz whose telephone number is (703) 305-8696. The examiner can normally be reached on Monday-Friday 8:00-4:30.

54.   If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on (703) 305-7452. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

55.   Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KRR

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